'Agrihoods' Next Big Amenity for Developers

Gated communities with houses clustered around golf courses, swimming pools, party rooms and fitness centers are common in many suburban areas. But homes built adjacent to functioning farms? Welcome to "agrihoods" - pastoral ventures with healthier foods as their focus.

This farm-to-table residential model has been sprouting up everywhere from Atlanta to Shanghai. It involves homes built within strolling distance of small working farms, where vegetables mature under the hungry gaze of residents and where people can venture out and pick greens for their salads.

There are many variations of the agrihood. They frequently include farmer's markets, inns and restaurants sited in communal hubs where the food is processed or sold.

A lot of things are driving the trend. There's more interest in fresh foods. There's interest in good health. There's interest in local everything. It's also about enjoying the many conveniences that help you meet your neighbors. [More]

Fed Adds $2 Billion to Hardest Hit Fund Florida's Share - Up to $327 Million

The U.S. Treasury Department announced Friday that it is adding $2 billion to the $7.6 billion Hardest Hit Fund, created in 2010 to help Florida and 17 other states with high rates of foreclosure. It also said that the fund's life will be extended to 2020, three years later than planned.

Florida is eligible to get up to $327 million in additional federal Hardest Hit Funds to help reduce
foreclosures and stabilize communities slammed by the housing bust. The state might have been eligible for even more had it done a better job of using the money it originally was allocated.

The federal investigator who oversees Treasury’s management of the Hardest Hit Fund says Florida has consistently "under-performed" other states in its use of the money. As of September, 116,484 Floridians had applied for help but only 24,071 had received it, barely one in five. Florida has among the longest waiting times and highest rejection rates of any Hardest Hit state, records show. [More]

Community Solar - Can It Help Resolve The War Between Utilities & Rooftop Solar?

Green energy will expand, made possible by better and cheaper technologies that are facilitated by public demand and public policies. But will it be delivered over the traditional transmission wires or will it be generated onsite with solar rooftop panels?

On the one hand, utilities can't get large transmission built. And on the other, utilities and homeowners can't agree on how the costs of the existing grid should be apportioned if more and more consumers self-generate.

Is there a middle ground between the centralized solar projects and the rooftop solar movement that is pitting homeowners against regulators, utilities and customers who remain fully connected to the grid? The trend now is to build smaller community-scale projects that may total 30 megawatts. Some of the biggest names in the solar industry are headed this way, including First Solar Inc. and SunPower Corp.

At issue here is net metering, which measures the amount of money that rooftop solar customers should get paid relative to retail electricity rates for surplus power they channel into the grid. Homeowners and businesses that generate an excess supply of electricity through their panels say that crediting them at the retail rate - the same price at which utilities sell - is fair because solar produces power at the most expensive time of day.

The utilities, in comparison, want to pay solar customers the wholesale rate, which they say
provides the funds needed to maintain the grid that is used by the masses. Even those who put panels on their roofs must use the grid, either to sell their excess back to the utility at whatever rate or to buy from the utility when they can't generate enough power like when the sun is behind the clouds. [More]

Writers Rolling Stone magazine: Nowhere has the solar industry been more eclipsed than in Florida, where the utilities' powers of obstruction are unrivaled. [More]

Using Sewage to Provide Buildings' Heating, Cooling

Sewage: it's the ultimate renewable energy source, says International Wastewater Systems (IWS) founder and CEO Lynn Mueller, who has commercialized a wastewater heat recovery process that captures heat from sewage and provides buildings' heating and cooling.

For every 10,000 people, 1 million gallons of 70 degree Fahrenheit sewage is created per day. According to the US Department of Energy, 400 billion kilowatts of hot water goes down the drain annually in the United States, which is roughly 40 billion dollars' worth of energy at an average cost of $.10/kW.

The Sewage SHARC (SHARC stands for sewage heat recovery) uses raw sewage to produce hot water, heat and cooling for multi-residential, commercial and district energy systems. The technology separates the solids from the wastewater and extracts heat via a heat exchanger to produce up to 160 degree Fahrenheit water for potable use, all before the wastewater is sent to a treatment plant.

A 172-unit SAIL project using the system reports a 550 percent efficiency rate. It saves residents about 70 percent on their hot water heating bills and reduces emissions by about 100 metric tons per year. Mueller says the SHARC system costs about $400,000 more and has a five- to seven-year payback. [More]
World Green Building Trends 2016 Shows Energy Conservation Still Key Motivator

Energy conservation is identified as the key motive for green construction and retrofits, surpassing all other reasons cited in newly released global survey results. The multi-question poll of 1,026 real estate owners, developers, contractors and design specialists in 69 countries also indicates steady growth in the green building sector with widespread adoption of rating systems and performance measurements.

World Green Building Trends 2016 is the third in a series of surveys and reports from Dodge Data & Analytics (formerly McGraw Hill Construction) first conducted in 2008. However, the newest findings are drawn from a more heterogeneous field of respondents of which only one third are Green Building Council (GBC) members, compared to 75 per cent of those surveyed in the previous 2012 exercise. This underpins the report’s conclusions that the green building market has become more mainstream.

Reduced energy consumption emerged as the top consideration - flagged by two thirds of respondents - in a breakdown of environmental and social reasons for embarking on green projects. Respondents were asked to choose their top two out of a list of five environmental and five social criteria, with results showing somewhat more consensus around environmental priorities.

Protecting natural resources garnered 37 per cent agreement, followed by reducing water use at 31 per cent, whereas there was no clear second ranked social concern after 58 per cent tagged encouraging sustainable business practices as number one. Rather, creating a sense of community, increasing worker
productivity, and supporting the domestic economy each captured 29 per cent of responses. [More]
[World Green Building Trends 2016]

Technology Updates

Solar-Powered Display Could Soon Be Topping Off Your Phone Battery
Kyocera is almost ready to launch its solar-powered charging cell phone display. SunPartner is responsible for the solar-soaking panel, which is called the WYSIPS (What You See Is Photovoltaic Surface). SunPartner says the "design-neutral" component can work with any type of phone. [More]

Oak Leaf Used to Make Rechargeable Sodium Battery
The quest for a way to create a rechargeable battery from sodium rather than lithium took a somewhat unexpected turn last month when scientists from the University of Maryland and the National Center for Nanoscience and Technology from Beijing discovered that a baked oak leaf pumped full of sodium made a successful negative terminal for a proof-of-concept battery. [More]

Off-Grid Device Keeps You Connected When Your Network Can't
Areas devoid of wireless service, or events where too many users overload the network, could become less of a connectivity issue with the recent launch of the Beartooth. Working on a sub 1 GHz bandwidth, the device is claimed to turn your smartphone into an off-grid network that enables users to talk, text and find their friends on maps where cellular service and Wi-Fi connections are non-existent. The Beartooth device connects to your smartphone via Bluetooth, then essentially acts as an antenna to establish a network with a two-mile radius.

ACEEE Releases Best Practices For State ‘Clean Power Plan’ Compliance

The Clean Power Plan sets national standards for reducing carbon pollution from power plants and lets states determine how to get there. Initial plans from each state are due in 2016, with final plans due by 2018 and cuts starting in 2022. By 2030, all states
must be in compliance.

The EPA set separate, nationally uniform rates for coal and natural gas power plants, treating all plants equally. Florida's rate-based limit is based on the share of each of those resources within the state. Florida's final (2030) rate-based emissions limit is 919 lbs/MWh. (Florida Compliance)

While energy resources, regulatory structures, and policy priorities vary widely from state to state, some elements of the planning process are common to many of them. ACEEE's guide highlights steps that states can take to help them use energy efficiency as a key compliance strategy. It is designed to help states

- Identify critical decisions and their implications for energy efficiency
- Identify and engage important stakeholders
- Evaluate energy efficiency compliance options

In February, the Supreme Court granted a motion to stay the Clean Power Plan while the DC Circuit Court hears arguments. That means there is a freeze on the rulemaking process while the CPP goes through legal challenges in the DC Court. Regardless, regulation of CO2 from power plants will continue to happen through The Clean Air Act. [More] [Best Practices] [Florida Pathway]

ARCSA Release Rainwater Harvesting Manual

The American Rainwater Catchment Systems Association (ARCSA), a partner of FGBC, has release a new Rainwater Harvesting Manual that provides a foundation in the vocabulary, concepts, strategies, data needs, and calculations used to develop passive and active rainwater harvesting systems.

The Manual includes educational material and the ARCSA/ASPE/ANSI Standard 63. It is intended to prepare people to pursue the additional training, research, and acquisition of practical experience, needed to design, install, and maintain rainwater harvesting systems. [More]